



THIRD WORLD PETROLEUM
DEVELOPMENT: A STATE-
MENT OF PRINCIPLES

National Petroleum Council • 1982



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The National Petroleum Council is a federal advisory committee to the Secretary of Energy.

The sole purpose of the National Petroleum Council is to advise, inform, and make recommendations to the Secretary of Energy on any matter requested by the Secretary relating to petroleum or the petroleum industry.

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Table of Contents

	Page
Preface	1
Conclusions and Recommendations	3
General Conclusions	3
Oil-Importing Developing Countries	3
U.S. Government	4
Third Party Public Agencies	4
Chapter One: Evolution of the International Petroleum Industry	7
Chapter Two: Private Sector Decision-Making Process	9
Preliminary Appraisal	9
Geological Prospects	9
Political Assessment	9
Economic Considerations	10
Chapter Three: Contractual Considerations	13
Different Forms of Contracts	13
Basic Contract Issues	13
Contractual Stability and Dispute Resolution	14
Measures to Provide Assurances in the Investment Contract	14
What the U.S. Government Can Do	15
Bilateral Treaties	16
Chapter Four: Taxation	17
U.S. Taxation of Foreign Income	17
Tax Position of Other Industrialized Countries	19
What OIDs Can Do	20
What the United States and OIDs Can Do Together	20
Chapter Five: Role of Third Party Public Agencies in OIIC Petroleum Exploration and Development	23
Multilateral Assistance Programs	23
Bilateral Assistance Programs	25
U.S. Government Programs	26
Capital Scarcity Considerations	27
 Appendices	
Appendix A: Request Letter, Description of the National Petroleum Council, and National Petroleum Council Membership Roster	A-1
Appendix B: Study Group Rosters	B-1
Appendix C: List of Oil-Importing Developing Countries	C-1
Appendix D: Statistics on Exploration Wells Drilled in the Free World, 1966-1980	D-1
Appendix E: Statistics on Free World Crude Oil Production, 1918-1980	E-1
Appendix F: Statistics on Oil Production and Consumption in Oil-Importing Developing Countries, 1976-1980	F-1
Appendix G: Statistics on World Bank Petroleum Lending, 1977-1982	G-1

Preface

Secretary of Energy James B. Edwards requested in his letter of March 10, 1982, that the National Petroleum Council (NPC) identify measures that could facilitate the development of petroleum in nontraditional provinces throughout the world (see Appendix A for the complete text of the Secretary's request letter and a description of the National Petroleum Council). He also suggested that the NPC examine actions the federal government could take to encourage U.S. companies to pursue oil and gas development in Third World countries.

To assist in its response to the Secretary's request, the NPC established the Committee on Third World Petroleum Development under the chairmanship of John E. Swearingen, Chairman of the Board, Standard Oil Company (Indiana). The Honorable Henry E. Thomas, IV, Assistant Secretary for International Affairs, U.S. Department of Energy, served as Government Cochairman of the Committee. The Committee was aided by a Coordinating Subcommittee. The study participants, listed in Appendix B, included representatives of major and independent petroleum companies; service companies; research, consulting, and academic organizations; and the financial community. All participants did not necessarily endorse each of the report's conclu-

sions and recommendations; the report does represent, however, a consensus of the participants' views.

The National Petroleum Council and the Department of Energy agreed that the study should analyze the factors that affect the decisions of U.S. private petroleum companies to explore for and develop petroleum in the oil-importing developing countries (OIDCs) of the Third World (see Appendix C for a list of OIDs). This report discusses these factors and recommends measures that OIDs and the U.S. government can take to encourage private companies to explore for and develop oil and gas. The NPC's view of the appropriate role for certain third party public agencies, in particular The World Bank, is also discussed. The study does not include detailed resource assessments or critique the programs of specific OIDs, nor does it discuss oil and gas exploration and development activities of countries outside the free world.¹

Cognizant of each other's needs, U.S. petroleum companies and OIDs can fashion partnerships that will stimulate petroleum exploration and development. This report is intended as a catalyst in that direction.

¹ Throughout the report the "free world" excludes the Union of Soviet Socialist Republics, Eastern Europe, People's Republic of China, North Korea, Mongolia, and Vietnam.

Conclusions and Recommendations

General Conclusions

Private petroleum companies have compiled an impressive record of successes in petroleum exploration and development throughout the world. Unfortunately, OIDs have not enjoyed the maximum benefit of these successes due in part to the relatively low level of activity by U.S. petroleum companies in these countries during the 1970s (see Appendix D). Although unfavorable geological assessments undoubtedly limited activity in some countries, unstable political and economic environments as well as unattractive contract terms were major deterrents to increased U.S. petroleum company activity in the OIDs during this period.

Given the present financial burden of oil imports on the OIDs, it would be in their interest to develop any economic petroleum resources within their borders and to use the proceeds from such development as a catalyst for further economic development. Also, it would be in the interest of the United States, and indeed the world, to develop additional stable and secure sources of petroleum to replace with new discoveries the hydrocarbons now being consumed.

The economic feasibility of risking capital to explore for petroleum in Third World countries is determined by several important factors, including the geological potential of the area for oil and gas, the relation of that potential to opportunities in other countries, the outlook for crude oil prices, the opportunity to invest capital profitably in established producing areas, the degree of confidence that the contract negotiated will be honored by the host country and that no taxes will be imposed that reduce the opportunity for profit provided for by the contract, and the degree of protection provided by international agencies to private companies in case the host country violates the terms of the contract.

The current surplus of crude oil production capacity in the free world creates uncertainty about future real prices of crude oil and about

the economic return on new investments to develop oil and gas throughout the world.

The OIDs, the U.S. government, and, to a limited extent, certain international agencies can each play a role in expanding the activities of U.S. petroleum companies in OIDs.

Oil-Importing Developing Countries

Conclusions

While geological considerations are paramount in deciding whether to invest in an exploration venture, U.S. petroleum companies also carefully evaluate the fiscal, political, and operating risks associated with each prospect before deciding whether to advance the substantial capital and technical resources needed for a successful venture.

Governments that desire to attract investment must offer terms that are competitive with those offered by other countries and that enable a petroleum company to earn a profit commensurate with its risks. Governments can enhance a given venture by reducing the risks that are within their control. Furthermore, a cooperative relationship between the government and the petroleum company can overcome many obstacles, including lack of infrastructure.

Recommendations

Fiscal and Financial Measures

- Structure income tax laws in a manner that will enable private companies to qualify for U.S. tax credits in order to avoid double taxation.
- Provide for an equitable division of the proceeds of a project over a wide range of success relative to capital invested.
- Give companies the right to export a reasonable portion of the oil and gas produced and retain the proceeds abroad. Production consumed within the host country should be priced at its value in the world markets.

- Establish foreign exchange regulations and investment laws that impose minimum restrictions on movement of funds into and out of the country.
- Permit the convertibility of dollars into and out of local currency at the free market exchange rate.
- Permit full repatriation of capital and earnings. Flexible policies in this area are usually inducements for the investor to reinvest the proceeds in new projects in that country.
- Minimize withholding taxes on interest and on repatriation of capital and earnings.
- Provide for the deductibility of interest paid in connection with project financing of development expenditures.
- Minimize import duties and licensing requirements on imported equipment and supplies.
- Avoid or minimize withholding taxes on foreign service contractors.
- Maintain personal income taxation of expatriate employees at a moderate level.
- Allow repatriation of movable equipment and facilities from the host country if oil and gas exploration is unsuccessful.

Operating Environment

- Provide for exploration expenditure obligations to be undertaken in successive stages with backout options at each stage.
- Give companies broad flexibility to import specialized equipment, bring to the country skilled expatriate personnel needed for the job at hand, choose contractors on the basis of efficiency, and make operating decisions expeditiously.
- Allow companies maximum flexibility in setting work programs and managing operations.
- Ensure fair treatment under local laws and foster a spirit of cordiality and mutual respect between the national population and the private companies' expatriate personnel.

Legal and Contractual Stability

- Provide the national oil company or other parties representing the government with legislative authority to act on behalf of the government.
- Commit the government to maintaining investment contracts in full force and effect without amending or nullifying any terms or imposing any tax or other fiscal obligations not in effect at the time the contract is signed.
- Commit the government and any party representing it to neutral arbitration of disputes under international law.

U.S. Government

Conclusions

The NPC strongly endorses the U.S. policy of encouraging petroleum exploration and development by private companies. A number of measures are necessary to remove disincentives to the operations of U.S. petroleum companies in OIDs.

Recommendations

- U.S. tax legislation should be modified to encourage petroleum development throughout the world. In particular, start-up costs in OIDs should be deductible in the same manner as similar U.S. costs without reduction of foreign tax credits generated. Also, rules regarding foreign taxes that qualify for U.S. tax credits should be revised to avoid double taxation of the same income.
- The Foreign Sovereign Immunities Act and act of state doctrine should be reviewed and legislation enacted that would open U.S. courts to claims against foreign governments by U.S. citizens who have lost their property abroad through illegal expropriations or who suffer damages as a result of a host government's breach of its contractual undertakings. The legislation should be in the form of an amendment to the Foreign Sovereign Immunities Act.
- While not elaborated upon in this report, certain U.S. legislation, particularly the Foreign Corrupt Practices Act and the foreign boycott provisions of the Export Administration Act of 1977 and the Tax Reform Act of 1976, pose unnecessary hindrances to U.S. companies operating abroad. These hindrances are unnecessary because they arise primarily from ambiguities and inconsistencies in the laws and not from the public policies that underlie them. These laws and the regulations that implement them should be amended to resolve ambiguities and inconsistencies.

Third Party Public Agencies

Conclusions

International development agencies, such as The World Bank and other multilateral and bilateral lending agencies, have limited resources derived primarily from the contributions of participating governments. These institutions can best direct their efforts to aid developing countries by funding infrastructure development projects (e.g., agricultural modernization, irrigation, water supply, roads, ports, educational facilities, and communications and power systems) that offer considerable social benefits to the host country but that do not exhibit profit potential sufficient to attract private capital.

Private capital is available for economically viable petroleum exploration, development, and production projects when acceptable terms and conditions are offered; the use of public funds for such commercial ventures displaces private financing. Development of uneconomic oil and gas deposits is not the best use of either private or public resources. Public agency funding of some submarginal petroleum resources may be constructive in some instances if the petroleum development fits into the overall development goals of the host country and yields substantial social benefits. Also, by helping to organize existing information about the exploration potential of an OI DC, The World Bank might act as a catalyst to subsequent private exploration work.

Competent and experienced advice, technical assistance, and contract services for OI DC petroleum development are available from a variety of private sources. The United Nations does not make the best use of its limited funds when it attempts to duplicate available private resources and expertise by providing petroleum consulting services to OI DCs.

Finally, the advantage of private companies is their economic efficiency and technical expertise. When funds from third party public agen-

cies are used for development of oil and gas in OI DCs, economic efficiency and the development of technical expertise may be compromised by political objectives.

Recommendations

- Third party public agency funds should not displace potential private investments in petroleum exploration, development, or production activities.
- The World Bank and its counterparts can assist in organizing the existing exploration data prior to private company bidding, and in some circumstances, in an advisory role, act as a catalyst to subsequent private exploration.
- In some special circumstances, The World Bank may have a legitimate, but limited, role in activities such as financing the host country's share of development and production costs where alternative funding is not readily available.
- Third party public agencies may also have a role to play in financing "downstream" investments needed to utilize some or all of the oil and gas production primarily in the local economy, including pipelines, distribution networks, and marketing facilities.

Chapter One

Evolution of the International Petroleum Industry

From the inception of the petroleum industry to the end of World War II, most of the major advances in petroleum technology as well as in petroleum output came from private companies in the United States. In 1918, U.S. production of 1.0 million barrels of crude oil per day represented 80 percent of the free world total. In 1945, U.S. production of 4.7 million barrels per day was 71 percent of the free world total (see Appendix E). Throughout this period the United States was a major exporter of refined products.

For almost three decades prior to 1945, there was increased petroleum activity outside the United States and a rise to prominence of seven private international petroleum companies, of which three were offspring of the Standard Oil Trust, which was dissolved in 1911, two were new U.S. petroleum companies, and two were European. The technical expertise, financial strength, and organizational talent of these companies were applied to the complex task of finding and developing oil, and refining and marketing products all over the world.

The earliest major discoveries outside the United States were in Mexico, Iran, Venezuela, and Indonesia. Private companies also discovered other prolific fields in the Middle East in the 1930s, where output rose dramatically after World War II.

The period from 1945 to 1973 witnessed rapid growth of free world oil production driven primarily by discoveries and development of new fields and greatly expanded production of existing fields in the Middle East. During this period, major reserves were also discovered in North Africa, West Africa, Malaysia, Canada, Australia, and the North Sea.

Total free world crude oil production increased from 6.6 million barrels per day in 1945 to 17.7 million in 1960 and 45.9 million in 1973. The U.S. share of free world production dropped from 71 percent in 1945 to 40 percent in 1960 and to 20 percent in 1973 (see Appendix E). Clearly, foreign sources had surpassed the United States in crude oil production. By 1973, the

United States had become a major importer of foreign oil, and its domestic output was decreasing.

In the post World War II period, rapid growth of the petroleum industry outside the United States provided the impetus for a large number of companies to expand into international exploration and development. As new opportunities and challenges arose, many U.S. petroleum companies that previously had been domestically oriented embarked on international operations. At the same time, government-subsidized companies, mostly European and Japanese, also entered the international arena. The story of the 1960s is in large measure that of increasing diversification and competition among private petroleum companies. There are currently several hundred private U.S. companies, large and small, exploring for oil and gas around the world.

Although the growth in oil demand was strong, the force of competition during the 1960s was such that the price of petroleum products to the consumer was modest. In fact, prices were so low that petroleum became the energy foundation of the industrialized nations.

Meanwhile, other important changes were taking place, most significantly the establishment of the Organization of Petroleum Exporting Countries (OPEC) in 1960. Founded by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela, the organization grew to 13 members within a decade. It was designed originally to forestall a drop in crude oil prices, and corresponding reductions in host country income from taxes and royalties. However, the organization soon began to challenge the private petroleum companies on pricing, ownership rights, and production levels. Its ascendancy was facilitated by the explosive growth of its member nations' oil exports, which increased from about 9 million barrels per day in 1961 to almost 30 million barrels per day in 1973.²

² Organization of Petroleum Exporting Countries, *Annual Statistical Bulletin*, Vienna, Austria, 1980.

If the period before 1960 was marked by the dominance of the established major companies, and the decade of the 1960s by the increased competition created by numerous new entrants, the decade of the 1970s was surely marked by a new set of conditions created by OPEC. Its most striking actions were the price increases of 1973-1974 and 1979-1980, which caused the consuming nations to undertake a major restructuring of the ways they produce and consume energy. The impact on the industrialized nations has already been profound. A combination of factors including conservation, increased reliance on other forms of energy, and weaker economic performance resulted in a major reduction in industrialized nations' oil consumption in 1981 relative to 1973. However, during the same period, oil consumption in the OIDCs has increased significantly.³ Because many OIDCs are just embarking on the energy-intensive phase of industrialization, their consumption is certain to increase, thus exacerbating already severe balance of payment problems.

Clearly, one of the most significant opportunities for an OIDC to reduce the financial burden of oil imports is through the development of any domestic petroleum resources that can be produced at a cost below that of imported oil. However, few OIDCs have the technical expertise and the large amounts of capital needed to accomplish this development independently.

Past experience demonstrates that substantial benefits have accrued to both foreign countries and private petroleum companies that have worked together in developing oil production in areas not previously explored. Yet, during the 1970s, exploratory drilling in the OIDCs did not expand at the same rate as in the United States and in other parts of the world (see Appendix D).

Especially striking is the decreasing participation of U.S. companies in overseas free world exploration. While drilling by U.S. petroleum companies in North America was steadily increasing, it remained essentially flat in the other industrialized nations, and actually declined in the OIDCs. As a consequence, very few significant discoveries were recorded in the OIDCs during the 1970s.

The level of effort by the U.S. petroleum companies in many OIDCs during the 1970s was directly related to geological assessments in individual OIDCs and to the perceived risk and relatively difficult contract terms that were available. This was in part an outgrowth of the destabilizing impact of the changes that were occurring in OPEC nations.

Geological assessments differ concerning the potential of a given area. Nevertheless, undiscovered oil and gas deposits undoubtedly exist in many OIDCs and could be economically developed by private petroleum companies as long as economic stability is maintained and terms and conditions for participation are sufficiently attractive.

Private companies, when given an opportunity to use their resources, experience, and technological dynamism, can formulate viable new ventures building on the mutual interests of the companies and OIDCs. Similarly, the OIDCs can determine their individual needs and how those needs can best be served by the expertise of the private petroleum industry.

The question for the 1980s, and perhaps for the 1990s, is how the OIDCs and the private petroleum companies can interact in a changing set of circumstances to meet the energy requirements of the OIDCs and the rest of the free world.

³ United Nations, *1980 Yearbook of World Energy Statistics*, New York, 1981. Also, see Appendix F.

Chapter Two

Private Sector Decision-Making Process

Each private company regularly appraises, reappraises, and compares opportunities for exploration investment around the world. These appraisals involve many uncertainties and assumptions, but they ultimately arrive at the final question: given the present knowledge about the geology, the operating environment, and the various risks associated with the project, do the potential earnings justify the monetary loss that will occur if the project is unsuccessful?

Preliminary Appraisal

The decision process usually begins with a belief that an area has potential for oil and gas production. If that belief is sufficiently strong, the private company normally allocates time, effort, and money to further study and evaluate the area.

Initial efforts typically focus on the gathering and assimilation of detailed information related to the area of interest. The company determines what, if any, information is available on the geology of the area and whether there are petroleum laws and related legislation in existence. Basic information on the availability of infrastructure (e.g., transportation, communications, housing, health services, and education) is also gathered in the initial stages of a company's research effort. The amount of geological information and legislative and physical infrastructure that may exist will vary widely. This, however, does not represent a deterrent to the entry of a private petroleum company.

Geological Prospects

The geological assessment is vital to the decisions of the private company to explore for oil and gas. Geological assessments change as more information is obtained; in fact, the true potential of a basin generally is not known until it has been almost fully developed. If the potential for hydrocarbon accumulations in commercial quantities appears good, exploration invest-

ments can be further evaluated. However, if the assessment of geological conditions indicates inadequate potential for commercial discoveries, there is no incentive to proceed further.

The worldwide petroleum resource base is very large, but it is unevenly distributed geographically. In oil and gas exploration, failure is much more common than success. Many OIDs will, unfortunately, turn out to be geologically unattractive despite intensive exploration. In this regard, it is a definite advantage for an OID to attract several companies to explore for and develop the oil and gas within its borders. Experience has shown that more exploration ideas are generated and evaluated if several competing groups work independently. The competitive nature of the private petroleum companies should permit each OID to negotiate optimum terms for developing for its economic benefit any hydrocarbon resources that are found.

Political Assessment

The political stability of a country is another important factor in deciding to invest. Exploration and development of oil and gas involves a long-term commitment of capital and other resources. It is undertaken on the basis of the terms and conditions of a contract that define the allocation of economic interest among the parties for the duration of the contract. An expectation that these contractual terms will not be subject to unilateral change (or compulsory renegotiation) is essential if private companies are to invest in an OID. Experience indicates that the countries that have honored contractual agreements and maintained fair and stable fiscal regimes have promoted rapid development within their borders by attracting other companies to explore additional areas, and by inducing the existing companies to bid vigorously for additional new acreage as it becomes available. By reducing contractual uncertainty, a host country can attract more private companies to risk their investment dollars.

Economic Considerations

Petroleum exploration is inherently risky. The greater the uncertainty and the potential cost of failure, the larger the prospective benefits must be in case of success to make exploration attractive.

Since failure is a possible outcome, private companies are more likely to undertake risk ventures when they can proceed carefully by stages in their exploration program. In order to limit their losses in the case of disappointing exploration results, companies should be allowed to withdraw without penalty after fulfilling agreed-upon work obligations.

The expected economic results in the case of success help determine whether a private company will proceed in an exploration venture. All successful petroleum projects involve a series of cash outlays on the part of the company during the exploration and development phase, followed by additional outlays and a series of cash returns (or equivalent production) during the production phase. Private companies evaluate each new project on the basis of the net amounts of cash flow (after all taxes, exactions, and other outlays by the company) and their timing.

The basic petroleum economic assessment measures the value of the reserves that can be reasonably expected to be found against the costs of finding, developing, producing, and marketing those reserves. Of prime importance to the company is how the value remaining after costs are recovered is to be shared. This value depends upon the quantity, quality, and type of hydrocarbons that are found, the price expected to be realized when these hydrocarbons are produced and sold, and the length of time needed to maximize hydrocarbon recovery from the reservoir. Exploration and production costs can vary widely depending upon size of reserves, location with respect to pipelines and other infrastructure, topography (or water depth in the case of offshore operations), and the market for the production.

Bonuses, Infrastructure Projects, Industrialization Projects

Petroleum development can be promoted most expeditiously if private companies can use their capital resources primarily for oil and gas exploration. For example, bonus money paid for a lease or concession reduces the amount of risk capital a private company can use for petroleum exploration and development. Infrastructure and unrelated industrial project requirements also drain funds that could otherwise be used for exploration and development. These projects can generally be financed by the host country with the help of third party public agencies, such as

The World Bank, and through participation of private contractors. A fair and equitable relationship with companies involved in petroleum operations will help create a climate that would attract investors from other industries as well.

Technology

Private companies respond favorably to reasonable requests for training of national personnel in petroleum operations. At the same time, technology and experience have real value to a company and can be licensed or sold, as can other assets. More importantly, technology is the basis of much of the private companies' competitive edge. The benefits of this experience and technology as applied by private companies are ultimately received by the host country. Requests for the transfer of proprietary technology have the same negative impacts on a company's assessment of an investment opportunity as would a request for an excessive commitment of capital.

Fiscal and Financial Considerations

Both the host country and the private petroleum company can achieve optimal economic results from a new oil and gas exploration project if careful attention is paid to certain key elements.

The following elements tend to make the prospect more attractive to the private petroleum company and provide a vehicle for increasing the government's resource base and income:

- Structure income tax laws in a manner that will enable private companies to qualify for U.S. tax credits in order to avoid double taxation.
- Provide for an equitable division of the proceeds of a project over a wide range of success relative to capital invested.
- Give companies the right to export a reasonable portion of the oil and gas produced and retain the proceeds abroad. Production consumed within the host country should be priced at its value in the world markets.
- Minimize or eliminate foreign exchange regulations and investment laws that impose minimum restrictions on movement of funds into and out of the country.
- Permit the convertibility of dollars into and out of local currency at the free market rate.
- Permit full repatriation of capital and earnings. Flexible policies in this area are usually inducements for the investor to reinvest the proceeds in new projects in that country.
- Minimize withholding taxes on interest and on repatriation of capital and earnings.

- Provide for the deductibility of interest paid in connection with project financing of development expenditures.
- Minimize import duties and licensing requirements on imported equipment and supplies.
- Avoid or minimize withholding taxes on foreign service contractors.
- Maintain personal income taxation of expatriate employees at a moderate level.
- Allow repatriation of movable equipment and facilities from the host country if oil and gas exploration is unsuccessful.

Because of the political and economic realities that may exist in an OIDC, it may not be possible to fulfill all of the fiscal and financial objectives of the private petroleum company. For example, a high level of inflation or balance of payment problems could result in exchange controls and the lack of free convertibility. In such an event, the OIDC should avoid, to the extent possible, an official exchange rate that is substantially lower than the free market rate. A less favorable rate would ultimately reduce the attractiveness of the exploration venture. Where there is substantial inflation, it is important that cost recovery and depreciation be indexed with inflation or kept on a dollar basis.

Operational Environment

Private companies are vitally concerned from the outset with all factors that affect their costs of doing business. In many respects, those costs are determined by the environment under which operations must proceed. This environment includes not only the physical environment of the prospect, but also the existence or absence of infrastructure, rules and regulations regarding importation of materials and equipment, and the ease of obtaining critical documents such as work permits and visas.

While the natural environment of an operating area will impose its own costs, the controllable environment will determine many others. Within this controllable environment, host governments can make significant contributions to operational efficiency in many cost-effective ways. Examples are: affording the company reasonable freedom in its choice of contractors; limiting demands for training and employment of nationals in the early stages of exploration; facilitating the use of all required means of transportation; timely issuance of work permits and visas; and expeditious port clearance of required equipment, materials, and supplies.

The operating companies, including contractors and subcontractors, must utilize highly

skilled expatriate personnel in their operations. While these employees are extremely adaptable, they are not totally immune from or unresponsive to their surroundings. They will perform best when those surroundings are reasonably secure and hospitable. Host governments can contribute in this regard by assuring fair treatment under local laws, affording adequate protection of person and property, and fostering a spirit of cordiality and mutual respect in public contacts and relationships.

Private petroleum companies have operated successfully in a wide variety of environments throughout the developing world. The important fact is not the existence or absence of infrastructure or the physical operating conditions that exist, but the willingness of the government to cooperate in overcoming problems. In a supportive environment, a company's management skills can be brought to bear in full measure. Plans can be made and carried out on schedule; costs can be budgeted, monitored, and controlled; key personnel can be placed as needed; and decisions can be made and acted upon with appropriate dispatch. In brief, the work can succeed best both in planning and execution if company management skills are permitted to function with maximum support. Any cost reductions achieved will benefit the host government as well as the company.

Economic Benefits and Alternative Investments

Even with the most sophisticated prospecting methods used by the U.S. petroleum industry today, only a small fraction of exploratory efforts undertaken result in discoveries of commercial accumulations of hydrocarbons. In order to sustain its business, a private company must generate sufficient earnings on successful projects to offset losses incurred in unsuccessful ventures. The host government must recognize that a successful project in its country must generate sufficient funds for the private company to earn an overall profit after absorbing losses from unsuccessful projects in that country as well as other countries.

Every private company has many investment opportunities that compete for its capital, technology, and personnel. These opportunities may be in the company's home country, industrialized or oil-exporting countries, or other OIDCs. As the final step in the decision process, the company compares the expected economic benefits and the perceived risks for all such competing alternative investment opportunities and ultimately invests in those ventures it believes to be most sound.

Chapter Three

Contractual Considerations

If the geological, political, and economic assessments indicate that a venture is potentially attractive, negotiations to structure a mutually acceptable contract can commence. Private petroleum companies have a great deal of flexibility at this stage, and the precise form of the contract is not of critical importance. What is of paramount concern is that the contract terms provide the petroleum company with an opportunity to earn a profit commensurate with the risks it undertakes at the time the contract is signed.

Different Forms of Contracts

U.S. petroleum companies generally prefer agreements that are structured along the lines of a concession or production sharing contract because these agreements provide greater access to crude supply and receive more favorable U.S. tax treatment.

Concessions

The concession contract is the oldest form of these agreements and has continued to be used in its original form in industrialized areas of the world, such as the United States, the North Sea countries, and Australia; it is also in use in a few cases in the Middle East. The concession agreement gives the petroleum company direct ownership in the minerals produced. The host government is entitled to a portion of the production as a royalty and also levies taxes on the proceeds generated by the sale of the balance of production.

The most common variant of the concession is a joint venture between the petroleum company and the host government. Through this structure, the host government participates directly as a working-interest owner in development investments and production.

Production Sharing Contracts

The production sharing contract first appeared in the 1960s in Indonesia. It is now the

predominant form of contract used in developing countries and has evolved into many variations as its application has spread. In this form of contract, the petroleum company provides all funds for operations and usually is entitled to a portion of production to recover its costs. The balance of production is shared between the host government and the petroleum company in accordance with percentage rates specified in the contract.

Risk and Service Contracts

Under risk and service contracts, petroleum companies are paid a fee for their services and do not earn any direct interest in hydrocarbon discoveries. Fees are higher under risk contracts than under other forms because exploration expenditures are generally undertaken at the sole risk of the petroleum company. Risk contracts have not been widely accepted because of the commercial and U.S. tax disincentives associated with earning a fee as opposed to an interest in the hydrocarbons. Service contracts have been used only under special circumstances in producing countries with developed reserves and infrastructure.

Basic Contract Issues

With few exceptions, all forms of these agreements must deal with the following basic issues:

- Exclusive right and obligation of the petroleum company to search for and produce petroleum from a specific geographic area within the host country's territory.
- A specific period of time in which to explore for and find a commercial field, with exploration obligations generally scheduled in stages with adequate backout options.
- Successive relinquishments, both required and voluntary, of portions of the contract area after fulfillment of minimum exploration obligations.

- Definition and method of determining the commerciality of discoveries. (Usually the agreement provides that the petroleum company initiate the declaration of a commercial discovery, although concurrence of the host government or the national oil company may be required. Quantitative criteria are often included; e.g., a discovery is considered commercial if sustained production from the discovery at a predetermined rate is reached. Delineation and development of a discovery proceeds under the terms of the original agreement. If a separate development license is required, the terms and provisions of such license are agreed to as a part of the original contract.)
- In the event of a commercial discovery, a second period of time in which to maximize production for the economic benefit of both the petroleum company and the host country.
- Right to export and sell production, as well as the right to retain sales proceeds abroad.
- Provisions specifying pricing and production allocation for sales made in the local market and for the transfer of funds received from such sales.
- In the case of production sharing contracts, provisions specifying the recovery of costs and the sharing of oil production.
- Provisions dealing with special taxation relief for the company and its employees, particularly with respect to personal income tax rates, duties on imported equipment, and exclusion from other miscellaneous taxes.
- Provisions specifying operational control including preparation of work programs and budgets, investment decisions, drilling of wells, sole-risk operations, as well as day-to-day operational decisions. (These provisions may be in a separate operating agreement.)
- Detailed accounting procedures to identify, define, and record the financial activities covered by the contract.
- Training of national personnel in petroleum exploration and production operations.
- Provisions covering the settlement of disputes, governing law, force majeure, and in many cases an undertaking by the host government to stabilize the fiscal regime and guarantee the contract terms.
- Provisions for handling natural gas whether produced by itself or in association with oil.

The economics of developing natural gas vary substantially from those for developing crude oil, and therefore different terms are required. If no local market exists, as is often the

case, considerable time and investment may be required to develop a market. Frequently, the flexibility to flare or reinject associated gas is also part of the contract.

Contractual Stability and Dispute Resolution

If a mutually agreeable contract covering the economic and operational terms can be worked out, the petroleum company must still evaluate the risk of expropriation or unilateral change by the host country of the terms, conditions, or fiscal regime that form the basis of its decision to invest its funds. Petroleum exploration and development contracts are long term in nature and either implicitly or explicitly allocate among the parties the economic results from the discovery of large or small fields as well as increases or decreases in revenues during the term of the agreement. It is on the basis of the risks and potential rewards agreed to in the contract that petroleum companies place substantial funds at risk. Therefore, it is important that once an agreement has been made, the parties be able to rely on the validity, stability, and enforceability of the contract.

Private company exploration activities expand in stable environments and shrink when changes in political or economic conditions cause contract disruptions. Moreover, instances of compulsory renegotiation or unilateral alteration create a wider perception of contractual instability, thereby dampening enthusiasm to invest in a country. Therefore, it is important that countries interested in expanding international petroleum exploration activity consider a variety of measures to establish a legal basis for contractual stability and an equitable means of resolving disputes.

Measures to Provide Assurances in the Investment Contract

While none of the measures proposed in this section can guarantee absolute stability, they can promote U.S. private investment by contributing greatly toward enhancing the confidence of the companies in the stability of these contracts.

The first measure U.S. petroleum companies look to is host country legislation authorizing the national petroleum company (or other representative of the government) to enter into exploration and production contracts.

This legislation is important because in most OIICs the government is the sole owner of the hydrocarbon resources. The legislation should be broad enough to cover the types of

contracts that generally result from negotiations with petroleum companies.

Once an agreement with a private petroleum company has been reached, the OIDC can provide added assurance of its intent to honor the agreement by raising it to the status of law through appropriate legislation. Particularly important are government undertakings to maintain the contract in full force and effect during its natural term, not to amend or nullify any of its terms or conditions, and not to alter the fiscal regime (including taxes) in place at the time the contract is signed. It is important for these obligations to be undertaken by the government, rather than a national oil company or oil ministry, because it is the government that has the sovereign power to tax, expropriate, or impose other conditions on the parties to the contract.

It is impossible to foresee all areas of potential dispute. Therefore, stability is greatly enhanced when governments agree in advance to resolve disputes in accordance with international law through recognized neutral arbitration procedures. A neutral forum for arbitration is also a stabilizing factor since the enforceability of an arbitration award is often dependent upon its judicial acceptance in the country where it is to be applied.

OIDCs can assure further contractual stability and enforceability by providing a central bank guarantee of their obligations.

What the U.S. Government Can Do

There are a number of measures available to the U.S. government that could enhance contract stability and enforceability.

Policy

While U.S. petroleum companies recognize that they are dealing with sovereign states, the governments of those states should be aware that the U.S. government has an interest in the equitable treatment of its corporate citizens. In order to avoid misunderstandings, the U.S. government should periodically and unambiguously state its opposition to expropriation or unilateral alteration of contractual terms and establish certain minimum standards that would apply in such instances. For example, it should be made clear that the United States views expropriations without prompt payment of the fair market value of the property taken, or expropriations taken as acts of political reprisal, to be illegal under international law. The U.S. government should also promote recognition of these principles by The World Bank, regional development banks, and other international agencies.

Legislative

Congress should review the Foreign Sovereign Immunities Act (FSIA)⁴ and the act of state doctrine (ASD)⁵ with a view to enacting legislation that would open the American judicial system to suits against foreign governments by the U.S. claimants who lose their property through illegal expropriations or who suffer damages as a result of a host government's breach of its contractual obligations. The legislation should take the form of an amendment to the FSIA and should also liberalize a U.S. claimant's right to secure attachment of a host government's commercial assets in the United States, either during or after litigation or arbitration awards against a foreign government. This legislation is necessary because host governments do not always agree to adequate dispute settlement provisions and in some instances ignore those they do agree to. In either event, a private company is left with little option but to turn to the courts of its own country and courts of other countries where assets of the host government can be found. Unfortunately, due to the FSIA and ASD, the pursuit of these claims in U.S. courts is often barred.

The question of the jurisdiction of U.S. courts emerges in the doctrine of foreign sovereign immunity, which developed out of cases in which the U.S. Supreme Court recognized that nations customarily viewed wrongs committed by foreign governments as appropriate for resolution by diplomatic and political means rather than by resorting to courts. In countries in which this barrier to jurisdiction remains absolute, it is impossible for a company to institute litigation against a foreign government, no matter how flagrant the wrong. In view of the increasing involvement of foreign governments in commercial activities—not the least of which is the rapid growth of national oil companies—private claimants dealing in a commercial context have often been left without effective recourse. In recent years many countries have developed a distinction between a government's "public" and "private" actions, with immunity available only for the former. In the United States, this has been codified in the "commercial activity" and "violation of international law" exceptions to the FSIA enacted in 1976. Although these efforts to restrict sovereign immunity were intended to be helpful to private litigants, the effect is quite limited. For example, unless the expropriation is held to be a "commercial activity," which is unlikely to emerge as the law although a few

⁴ Public Law No. 94-583, 90 Stat. 2891 (1976) [codified at 28 U.S.C. Section 1330, 1332, 1391, 1441, and 1602-11 (197)].

⁵ A judicial doctrine not codified by statute.

lower courts so held in the heat of the Iranian crisis, claims based on illegal expropriations are barred unless the property expropriated or proceeds obtained therefrom are present in the United States, or the foreign government agency holding the property is doing business in the United States. Similarly, breach of contract actions are generally barred unless there is a direct effect of the breach in the United States. Given the increasing role of national oil companies, it is not surprising that U.S. companies fear that the doctrine of sovereign immunity will bar enforcement of their rights under oil and gas exploration and development contracts with foreign governments.

The second element of U.S. judicial restraint—the act of state doctrine—is an even broader barrier to litigation, for it is available to private parties as well as public entities that may raise it after losing immunity under the commercial activity exception of the FSIA. It reflects an attitude similar to that at the root of sovereign immunity:

...the courts of one country will not sit in judgment on the acts of the government of another done within its own territory. Redress of grievances by reason of such acts must be obtained through the means open to be availed of by sovereign powers as between themselves.⁶

Although much legal commentary has been written on the origins and development of the act of state doctrine, it need merely be noted that courts have made only faltering and inconsistent efforts to define the circumstances in which this barrier should be applied. Legislative efforts to restrict its application have also failed. The so-called Sabbatino or Second Hickenlooper Amendment⁷ has been narrowly construed to exclude all contract claims, all claims by a foreign state's own nationals, and all claims where the confiscated property or its proceeds are not physically present in the United States, as well as any case in which the President invokes the doctrine in the interest of foreign relations. This doctrine is so broad that it was used by one federal judge

to bar enforcement, under a U.S. treaty, of a foreign arbitration award granting damages arising as a result of an illegal expropriation.⁸ Similar doctrines in other industrialized countries are less broad in scope. Clearly, denial of access to U.S. courts does little to encourage U.S. companies to have confidence in their ability to obtain legal redress if they invest abroad and are expropriated or suffer damages by reason of a host country's breach of its contractual obligations.

Bilateral Treaties

The governments of the United States and OIDs can enhance the investment climate for the private sector by devoting greater attention to the negotiation of bilateral or multilateral investment treaties. Since World War II, the United States has entered into over 20 such relationships. Although these treaties can be styled differently, they generally cover at least the following major areas:

- Equality—Assurances that nationals, residents, and companies of both countries will receive equal treatment under the laws of both countries.
- Investment Dispute Settlement—Establishment of arbitration procedures and facilities to be available to settle investment disputes between governments and/or nationals of the respective countries.
- Compensation for Expropriation—Assurances that compensation will be prompt, effective, and will represent the full value of the property taken, i.e., fair market value existing prior to the threat of expropriation.
- Transfer of Funds—Minimization of restrictions on the free flow of funds into and out of the countries.

While recognizing that natural resource development involves especially sensitive issues, the recent tendency to exclude these critically important but contentious areas from some treaties must be overcome.

⁶ *Underhill v. Hernandez*, 168 U.S. 250 (1897) at 252.

⁷ Foreign Assistance Act of 1964, Pub. L. No. 88-633 Section 301 (d)(9), 78 Stat. 1009 (1964) [current version at 22 U.S.C. Section 2370 (e)(2) (1976)].

⁸ The case, *Libyan American Oil Company vs. Socialist People's Libyan Arab Jamahiriya*, 482 F. Supp. 1175 (1980), was subsequently vacated as being moot, after the parties reached a settlement during the appeal process.

Chapter Four Taxation

One of the basic elements involved in making investment decisions with respect to an OI DC is the taxation atmosphere in both that country and the country of the investor. The tax legislation and policies of these countries must be studied by a potential investor for their impact separately as well as their interaction with each other.

This chapter deals first with the legislation and policy of the U.S. taxation of foreign income, the potential impact of such legislation and policy on investment decisions, and the competitive position vis-a-vis other countries. Secondly, it presents a discussion of what OI DCs should do to encourage investment from the tax standpoint. Finally, it outlines ways in which the United States and OI DCs can cooperate to fashion specific policies to encourage petroleum development in OI DCs through bilateral tax treaties.

U.S. Taxation of Foreign Income

History

The United States taxes its citizens, domestic corporations, and aliens resident in the United States on their entire income, whether or not it is earned within the United States. When U.S. taxpayers derive income from sources outside the United States, the country in which the income is earned may also impose a tax. Thus, U.S. taxpayers could be taxed twice on the same income—once by the United States and once by a foreign country. Countries have developed various devices to eliminate this problem of double taxation. The device used by the United States is the foreign tax credit.

The foreign tax credit allows U.S. taxpayers to offset the U.S. tax on foreign income by the amount of taxes paid to the foreign country. The credit does not allow an offset against taxes on income earned in the United States.

A U.S. foreign tax credit is allowed only for payments of foreign income, war profits, or

excess profits taxes. Other types of payments, such as royalties, may only be treated as deductible expenses rather than as taxes that can be used to offset U.S. income taxes. One of the most contentious issues with respect to foreign tax credits is determining whether a particular "tax" paid by a petroleum company to a foreign country is, in fact, an income tax. This issue is critical in the case of petroleum companies operating abroad since it is often difficult to distinguish between a tax on oil profits and a royalty paid to a foreign sovereign in its capacity as owner of the natural resources.

Internal Revenue Service (IRS) Position

In the early years of U.S. petroleum operations abroad, the IRS treated payments to a number of major oil-producing countries as creditable against U.S. income taxes otherwise payable to the United States on income earned abroad. In recent years, however, the IRS has reversed this position and issued temporary regulations that attempt to define more narrowly the type of payments that qualify for U.S. foreign tax credit.

These regulations establish three basic criteria under the U.S. Internal Revenue Code for a charge imposed by a foreign country to be classified as an income tax. First, the charge cannot be compensation for a "specific economic benefit" such as the right to explore for oil. Second, the charge must be based on realized net income. Third, the foreign law must be generally applied and contain reasonable rules for such matters as source of income and residency of the taxpayer.

The basic thrust of the current IRS position as demonstrated by these regulations is to restrict the types of foreign "taxes" that qualify for the foreign tax credit to those that bear a rather close similarity to the structure of the U.S. income tax. The regulations pay particular attention to excluding a credit for payments on foreign

petroleum income that may be significantly higher than taxes imposed by the foreign country on income derived from operations other than oil and gas production.

Congressional Action

In 1975, Congress decided that special legislative restrictions should be imposed on foreign petroleum income. The primary reason for this decision was Congressional concern that the foreign tax credit mechanism could be abused because of the problems in determining whether a payment to a foreign government was a tax on extraction income or some type of royalty (deductible as a business expense but not creditable for U.S. tax purposes).

Originally, U.S. petroleum companies operating in such countries as Saudi Arabia paid royalties to the government because there was no generally imposed income tax. As time passed, such countries enacted income tax laws and used them to increase their revenues from U.S. petroleum companies by raising the tax rates. These higher rates levied by the host country were less onerous as long as the operating companies could credit the taxes against U.S. taxes otherwise payable. However, the high rates of these petroleum taxes plus a belief that at least some part of these "taxes" should be treated as royalties led Congress to limit the benefit of the foreign tax credit for foreign petroleum income.

In 1975, Congress enacted Section 907 of the Internal Revenue Code, which essentially provided that the tax a U.S. company pays on foreign oil and gas extraction income would qualify for the credit only to the extent of 48 percent (i.e., the highest U.S. corporate tax rate then applicable) of the extraction income. A small additional amount of taxes paid could be used as a credit in other taxable years, but for the most part, taxes paid above the 48 percent limit (now 46 percent) could neither be credited directly against U.S. taxes nor deducted as an expense in computing U.S. taxes.

The statute also provided that the limitation on the amount of credit that could be used in one year had to be calculated separately for foreign oil and gas income and other types of income. This segregation was designed to prevent taxes paid on foreign oil- and gas-related income from offsetting U.S. taxes due on other types of foreign source income.

In regard to losses generated by foreign petroleum operations, the statute provided that a net loss from another country would not be taken into account in computing the company's foreign oil and gas extraction income for the year but rather could be used to reduce a company's foreign oil- and gas-related non-extraction

income for the year. This rule (the "single country loss rule") could benefit a petroleum company where it had insufficient foreign oil- and gas-related tax credits to offset current tax on such income. (Of course, even if a company had insufficient foreign tax credits, the single country loss rule could reduce foreign oil- and gas-related income to such an extent that an excess amount of foreign tax credits would result.) This provision recognized that start-up operations in new countries generate losses and that such activities should be encouraged and not penalized by further reducing a petroleum company's creditable foreign extraction taxes by such losses.

1982 Amendments to Section 907

The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) has made further changes in the ability of U.S. petroleum companies to claim full benefit of foreign tax credits, to absorb start-up losses from foreign operations, and to defer taxation on foreign income.

TEFRA amended Section 907 in ways that adversely affected the policy of encouraging oil and gas development in developing countries.⁹ TEFRA repealed the single country loss rule, effective January 1, 1983, thereby reducing the amount of foreign extraction taxes that may be treated as creditable against U.S. income taxes. TEFRA also provides a so-called recapture rule under which an overall foreign oil and gas extraction loss in one year could result in the reduction of the amount of extraction taxes in other years that may qualify for the credit. This recapture rule applies even if the U.S. petroleum company received no tax benefit from the loss.

TEFRA also gives the Treasury Department authority to split an otherwise creditable income tax into a creditable amount and a non-creditable but deductible amount. This authority may be used whenever the Treasury Department determines that the foreign law imposing a tax on petroleum income is either structured or operates in such a way that the tax on petroleum income is materially greater than the tax on non-petroleum income. Thus, the amount of tax imposed, in addition to the nature of the tax, will determine its qualification for the foreign tax credit in this instance.

Lastly, the new law changes the Internal Revenue Code's anti-tax-haven rules to currently tax certain oil- and gas-related income earned by a foreign corporation controlled by a U.S. company. The usual rule under the Code is that

⁹ Section 211 of the Tax Equity and Fiscal Responsibility Act amended Code Section 907.

income earned by a foreign corporation controlled by U.S. shareholders is not taxed to those shareholders until the corporation distributes a dividend to them. There is an exception to this general rule that imposes current tax on U.S. shareholders with respect to certain income from so-called "tax haven activities" conducted by foreign corporations controlled by U.S. shareholders. Prior to 1976, such income generally included only passive investment income or certain sales or services income derived from transactions involving related parties. However, since 1976, international shipping income has also been subject to current tax regardless of whether it was active or passive income or the relationship of the parties involved. On this same basis, TEFRA has added to the types of income subject to current taxation of foreign source income derived from processing oil and gas and from distribution of oil and gas or their products. Service income, for example, from transportation of oil and gas, now may also be subject to current taxation in the United States even though no funds are remitted from the foreign company to its U.S. owners.

The changes beginning in 1975 in the U.S. taxation of foreign income burden the operations of U.S. petroleum companies in their search for new sources of hydrocarbons abroad.

Tax Position of Other Industrialized Countries

Many countries provide their foreign exploration investors or agencies with benefits not provided to U.S. investors. Some governments make loans to explorers that are repayable only if the venture is a commercial success, other governments have their wholly owned oil companies, and some governments own portions of private companies.

Probably more significant is the taxation law and policy of such governments. A survey of these laws and policies follows.

United Kingdom

Profits of a foreign branch of a U.K. resident company are subject to tax, but a foreign tax credit, limited to the U.K. tax attributable to the foreign branch profit, is allowed. A foreign branch loss in one country is deducted in arriving at total U.K. taxable income and so may offset for U.K. tax purposes oil profits in a second country that are highly taxed. Such a loss may not, however, offset U.K. source profits arising from North Sea production. If a foreign loss is used to reduce U.K. source (non-North Sea production) income, there is no recapture of any tax benefits.

In addition, profits from production, refining, and other oil operations earned by a foreign subsidiary of a U.K. resident corporation are not taxed until the profits are repatriated by means of a dividend.

The Netherlands

A foreign loss from pre-production costs in one country offsets foreign profits from all other sources and results in a tax benefit if it exceeds the company's exempt foreign source income. If a foreign loss has been written off against Dutch source income, the loss is required to be taken into income to the extent of profits over the succeeding eight years. However, if there is not enough income to offset the loss after eight years, the loss will not be subject to further recapture. In addition, income from refining and other oil-related activities earned by a foreign subsidiary of a Dutch corporation is not subject to tax when it is earned or when it is repatriated.

France

Foreign branch operations are exempt from tax regardless of their nature. Thus, extraction as well as refining profits conducted outside of France are not subject to French tax. With Budget Ministry consent, a taxpayer may elect, if there is a foreign loss, to be subject to French tax and thus use the loss to reduce French source income. If such an election is made, the taxpayer is allowed a foreign tax credit on a per country basis if profits are derived. There is no recapture of the tax benefits from use of the foreign loss. In addition, in the case of a foreign subsidiary of a French corporation, profits from refining and other oil-related income are not subject to French tax when earned and, except when the special loss election is made, are not subject to tax even when they are repatriated by means of a dividend.

Italy

Profits of a foreign branch are subject to the national and local income tax. A foreign tax credit is permitted to offset most of the national tax and a branch is exempt from the local tax if the branch has separate management and accounting in the foreign country. If a foreign branch has a loss operation in one country it does not reduce the profits from other countries but is allowed to reduce income from Italian sources. There is no recapture of this tax benefit. In the case of a foreign subsidiary of an Italian corporation, profits from refining and other petroleum activity are subject to tax only when they are repatriated by means of a dividend.

Japan

Profits of a foreign branch are subject to tax, but a full foreign tax credit is allowed on an overall basis. Excess foreign tax credits may be carried forward five years. Most importantly, losses of a foreign branch reduce income from sources within Japan without recapture. Income from a successful venture would be subject to tax with a foreign tax credit offset. In the case of a foreign subsidiary of a Japanese corporation that has profits from refining or other petroleum-related activity, there is no Japanese tax until the profits are repatriated by means of a dividend. There are also cash subsidies granted.

Germany

Foreign branches that have profits are either exempt under tax treaties or allowed a foreign tax credit on a per-country basis. If a foreign branch of a German corporation sustains losses in a country not having a treaty with Germany, those losses can be used to reduce profits on German source income even though there are other foreign source profits being derived by the corporation. There is no recapture of the tax benefit. Losses sustained by foreign branches in treaty countries may be used to reduce German income. Subsequent income is not taxed except to the extent of recapture. In addition, foreign subsidiaries of a German corporation that derive profits from refining and other petroleum income are not subject to German tax until the profits are repatriated by means of a dividend, and not at all if certain ownership requirements are met. Losses of foreign subsidiaries may reduce the domestic parent's income subject to recapture.

In summary, in the case of many countries surveyed, the U.S. system appears to be somewhat harsher than that of the foreign countries. In particular, corporations organized in the United Kingdom, the Netherlands, France, Japan, and Germany may under certain circumstances have a competitive advantage over companies organized in the United States because of their treatment of start-up costs and their ability to avoid double taxation.

What OIDCs Can Do

Income Tax Laws Should Be Creditable

An OIDC should try to ensure that its tax laws meet U.S. creditability tests where this can be accomplished without really diminishing the host government's share. The pertinent U.S. rules were briefly outlined in the earlier part of this chapter. In particular, the tax should be based on "net income," which requires that the OIDC income tax law provide for the deduction of

all significant expenses, such as interest, depreciation, amortization, salaries, and wages, as well as providing for loss carryovers and consolidation of income and expenses from all operations by a taxpayer within the country.

What the United States and OIDCs Can Do Together

Without a revision of existing domestic law, the United States could turn to bilateral tax treaty negotiations with OIDCs in order to fashion specific policies to encourage petroleum development in certain countries. The United States has entered into bilateral tax treaties with many countries, although mostly with developed industrialized nations rather than with developing countries. Tax treaties provide an opportunity for two nations to resolve specific conflicts between their tax systems. They also give countries a vehicle for avoiding double taxation of their residents and for providing investors with greater certainty in determining the tax consequences of their investments in different jurisdictions.

As a rule, U.S. tax treaties do not contain provisions that differ substantially from what is permitted under domestic law. This is one reason the United States has so few treaties with developing nations: such countries usually request concessions that are at variance with some of the fundamental positions of U.S. tax policy. Nevertheless, if recent changes in U.S. tax law operate to discourage U.S. petroleum companies from exploration and development efforts in OIDCs, then separately negotiated tax treaties could provide a vehicle for special tax concessions that would channel exploration efforts to the OIDCs. Whether the United States would be prepared to enter such treaty negotiation is uncertain; further, such treaties must be ratified by the U.S. Senate. Without changes, however, there are real tax disincentives for U.S. petroleum companies to incur losses attendant to start-up operations in OIDCs.

Foreign Tax Credit

The vast difference between the economies of the United States and the OIDCs, with the resulting one-way investment flow, provides little incentive for the OIDCs to negotiate treaties with the United States. The new restriction on the foreign tax credit as it applies to foreign oil income, however, may weaken this historical reason for lack of U.S. tax treaties with developing countries. Such treaties could be used to grant a more liberal foreign tax credit to U.S. petroleum companies and to encourage the companies to undertake operations in OIDCs.

Tax Sparing

Related to the question of foreign tax credits for petroleum-related income is the issue of tax sparing. As part of tax treaty negotiations, developing countries often ask for tax incentives from industrialized countries, such as a "tax-sparing" credit. With this device, if a developing country grants a tax holiday or reduction of withholding taxes, the foreign tax credit of the industrialized country would allow its investor to take into account the taxes that would have been paid without the tax holiday or reduction in withholding. Without a tax-sparing credit, the incentive of tax reductions in the developing country would be diluted by the reductions in the foreign tax credit in the industrialized country to the extent the income is repatriated and taxed.

The United States has historically rejected tax-sparing credits in its treaty negotiations with developing countries. A reversal of this policy in the case of tax treaties with OIDCs would be one way to provide a special incentive to investment in those countries. It would also indicate a greater willingness by the United States to be more flexible in its tax treaty negotiations with OIDCs.

Services and Royalties

There is often a problem in distinguishing between payments for services, and royalties in transactions with developing countries. The U.S. position has been that income from technical services should be treated as other service income and taxed on a net basis after deduction of expenses. Developing countries often prefer to include such income with royalties and withhold at a flat rate. The usual reason for this position is the difficulty in administering a net tax on such incomes. Since technical services are typically a significant part of a petroleum company's foreign activities, it would be an incentive to such activities for the United States to be willing to make concessions in this area in any treaty negotiations with OIDCs.

Permanent Establishment

Developing countries usually seek to expand their jurisdiction to tax enterprises by broadly defining the type of activities in their countries that are considered "permanent

establishments" and are therefore subject to tax. There are major conflicts between developing countries and industrialized countries over the meaning of permanent establishment, e.g., the case of oil drilling rigs and platforms. This is one example of how OIDCs, if they desire to encourage exploration by U.S. petroleum companies, could relax their requirements so as to allow exploration to be conducted without incurring undue tax burdens.

Shipping Income

Many developing countries do not have extensive shipping fleets operating in international commerce. Consequently, they are reluctant to enter into agreements providing for the reciprocal exemption of shipping income from taxation. Even if an OIDC would not want to enter such an agreement, it should still be possible to negotiate by treaty a reduction in the rate of tax on such income, particularly in the context of oil operations.

Investment Tax Credit

As a general rule, the investment tax credit allowed by the U.S. Internal Revenue Code is not available for property that is used predominantly outside the United States. There are exceptions to this rule that permit the credit for property used to explore for and develop resources in the U.S. Continental Shelf and for property used for similar purposes in the northern portion of the Western Hemisphere. The investment credit was at one time available for property used for natural resource development in any international waters. However, Congress repealed this provision in 1975 because it was viewed as an incentive for production in foreign countries, which increased neither jobs nor the supply of oil and gas in the United States. Despite the repeal of this provision, it is obvious that the statute still uses the investment credit as an incentive for exploration and development in certain parts of the world. The extension of this incentive to operations in the offshore areas of OIDCs would thus not be unprecedented. If the United States were to decide as a matter of policy that it wanted to encourage development of resources in OIDCs, the use of the investment credit as a targeted incentive would be appropriate.

Chapter Five

Role of Third Party Public Agencies in OIDC Petroleum Exploration and Development

Historically, private petroleum companies from industrialized countries have provided the dominant share of the capital and technology required to create and expand the petroleum industry in the developing countries of the free world. These companies have compiled an impressive record. Private companies have consistently sought to participate in exploration programs in OIDs that are attractive from a geological perspective. However, they have had to reduce their efforts during unstable political and economic periods such as the 1970s, or when contract terms have been too harsh to make these investments attractive.

Within the last decade, however, other parties have begun to play an increasing role in OIDs petroleum activities. These parties include both international organizations and state-owned oil companies of several industrialized countries. The U.S. government is not directly involved in foreign petroleum development per se, but its economic assistance programs have an indirect impact on private sector activities.

The NPC believes that competition between independent firms is the best mechanism to bring about efficient resource allocation and foster technological innovation. Private companies are essentially apolitical; their focus is on economic efficiency and technical competence. They are not likely to overlook attractive OIDs opportunities, nor are they likely to squander resources on unsound projects. The OIDs can benefit by making the fullest possible use of valuable private sector skills and resources.

This chapter reviews the role third parties have played and their impact on private sector activities to date, and provides a discussion of the role appropriate to encourage efficient exploration and development of oil and gas in OIDs by private companies.

Multilateral Assistance Programs

Multilateral Development Banks

The United States is a major participant in four important multilateral development banks (MDBs): The World Bank, the Inter-American Development Bank, the Asian Development Bank, and the African Development Bank. Only the first two have participated in OIDs petroleum exploration and development, and of the two, The World Bank—the oldest and by far the largest of the MDBs—is the more significant. Accordingly, this review focuses on The World Bank, although the conclusions and recommendations offered are generally applicable to all potential petroleum projects of MDBs in OIDs.

The World Bank has a long record as the leading international agency providing multilateral funding for reconstruction and development. Historically, World Bank financing has focused primarily on infrastructure development projects that would offer sizeable social benefits to the host country, but that offer insufficient economic benefits to attract all the private capital needed. Typical projects for funding are agricultural modernization, irrigation and water supply, roads and ports, educational facilities, and communication and power systems.

Most World Bank funding has been channeled through its two major agencies: the International Bank for Reconstruction and Development (IBRD), which lends funds at interest rates that are reflective of private market rates (but still below alternative funding costs for most borrowers); and the International Development Association (IDA), which lends to very low income (annual GNP less than \$731 per capita in 1980 dollars) developing countries on very lenient terms (up to 50-year maturities, 10-year grace period and no interest charge other than an annual service charge of less than 1 percent).

Also, through the International Finance Corporation (IFC), the "private enterprise" arm of The World Bank, loans are made, equity positions are taken, and help is given to promote new risk capital projects of private, preferably local, investors.

Within the last five years The World Bank has extended its normal line of activities into undertakings that compete directly with private petroleum companies. Financing has been mostly in the form of interest-bearing IBRD loans, although some IDA loans to low income OIDs have been made. Funds have been directed toward three different areas of activity:

- **Exploration Promotion Projects:** The Bank has given direct assistance to OIDs in offering new acreage to industry by preparing promotional packages of exploration data, petroleum laws and contracts, and bid invitations.
- **Exploration Support Projects:** The Bank has financed the host government's share of a joint venture with a private company. It has also financed high risk exploration performed by national oil companies owned by the OID governments.
- **Production Development Projects:** The Bank has financed development of known oil and gas fields, natural gas distribution for domestic markets, pipelines, and other related investments.

Data on the extent and scope of World Bank petroleum lending are given in Appendix G. The bulk of the lending has gone to state-owned oil companies.

In addition to direct financing of projects, The World Bank has made itself a party to petroleum agreements between a private petroleum company and a host OID through the use of a "Letter of Cooperation." Pursuant to the undertakings, the Bank furnishes a commitment to provide some financing of development that might result from a private company's exploration program, contingent upon the development expenditures' meeting the Bank's criteria for such lending. Such commitments are intended to foster the political and economic stability of operations of the host OID.

The growing role of The World Bank and other developmental agencies in financing OID petroleum programs is controversial.¹⁰ The NPC believes that there is a danger that much of the

World Bank petroleum lending program would merely displace private resources without increasing the overall level of hydrocarbon supplies of the OIDs or the free world. Indeed, since World Bank resources are limited, diversion of their funds to petroleum projects would constrain the orderly development of needed infrastructure projects. In some cases, this decision would lead to inefficiencies in the petroleum projects as well.

The NPC believes that private company and host government working agreements remain the most efficient and economical way to maximize oil and gas exploration and development in the OIDs. Private companies have an impressive record of successful petroleum exploration in all parts of the world. These companies can continue to do the job expeditiously if their initiatives are complemented by third parties, where necessary.

The World Bank may be specifically helpful to an OID in need of assistance in collecting and organizing all the existing exploration data that may be indicative of its petroleum potential, where the objective is to attract further exploration attention by private bidders. However, the Bank should not become directly involved in the acquisition of new geological, geophysical, or well data. In some situations, The World Bank, acting as an impartial advisor on petroleum laws, contracts, and bidding, may be able to act as a catalyst in attracting additional private exploration interest to an OID. However, the NPC has concerns that in some situations the Bank's impartiality may be jeopardized, and it could be forced into taking partisan positions in normal commercial relationships and negotiations that might better have been conducted on a bilateral basis between the private petroleum company and the host country. OIDs seeking to maximize their exploration potential will often find they are best served in such efforts by working within the framework of competitive negotiations involving several private petroleum companies and through the use of independent consultants as needed.

Normally, The World Bank should also not finance oil and gas production projects, including development drilling, where the projects are commercially viable or could be made so by changes in the contract terms or other policies of the host OID. Additionally, the NPC recommends a very cautious approach on the part of

¹⁰ Underlying any analysis of World Bank policy are serious concerns about the prospects for OIDs growth, the heavy debt burden of OIDs, and the role of The World Bank and the Interna-

tional Monetary Fund in dealing with these global problems. The NPC believes that, despite their importance, these issues are beyond the scope of this study.

The World Bank in financing oil or gas production projects that are clearly submarginal as commercial ventures but appear to promise social and developmental benefits to the host country. In particular, funding uneconomic petroleum production projects in order to displace oil imports is rarely a worthwhile undertaking: the capital and technology for the project must themselves be imported, and the project itself produces little in the way of lasting OI DC employment.

In those special cases in which the development of the submarginal oil or gas resource is an integral part of a host country's overall economic development program, the NPC believes that The World Bank may have a legitimate role to play. This role might involve the Bank in financing the "downstream" investment needed to utilize some or all of the oil and gas production primarily in the domestic economy, including pipelines, distribution networks, and marketing facilities. However, the basis for such support should be related to the merits of the overall development program, not just the oil and gas component.

In a similar vein, the NPC believes that The World Bank can continue to play a very important supportive role in commercial oil and gas development in many OI DCs by financing infrastructure improvements. In most cases, infrastructure lending is directly complementary to private sector investment. Absorbing the entire cost of developing infrastructure, such as ports, roads, communication facilities, water supplies, housing, health services, education, and communications, may make the overall economics of the project unacceptable to a private petroleum company. Private companies provide for some infrastructure investment at the field site and the port. However, a major share of the investment in these facilities is properly borne by the host government. It is appropriate and beneficial for The World Bank or other international development agencies to help the host government finance such facilities since they serve the total needs of the community and spur overall economic growth. This function is consistent with the traditional role of The World Bank.

The NPC questions the role of The World Bank where it in effect becomes a third party to agreements between the private petroleum company and the host government through "Letters of Cooperation." The World Bank may have a role to play in those special limited circumstances where the host government has no financial resources to pay its share of development and production costs and cannot obtain alternative funding at reasonable terms. However, it should be kept in mind that once a discovery is made, commercial banks will, in most instances, lend

funds to host governments under normal project financing arrangements. In some circumstances, The World Bank's "Letters of Cooperation" may result in The World Bank's taking a minority interest in co-financing such projects with commercial banks, and may also result in increasing political and economic stability in the host country, both for the banks and the petroleum companies.

United Nations Agencies

Agencies of the United Nations (UN) are not extensively involved in OI DC petroleum exploration and development per se. However, two activities of the UN that may affect OI DC petroleum development are worth noting.

The United Nations Development Program has provided technical project assistance and financing for energy assessments in developing countries in cooperation with The World Bank.

The UN Center on Transnational Corporations provides several services to the developing countries that influence their relationship with private corporations. The key services are described below:

- Maintaining a roster of international advisors in the areas of economics, law, finance, management, and accounting that can be utilized by developing countries.
- Conducting specialized workshops on foreign direct investment.
- Serving as a clearinghouse for a wide-ranging body of information on transnational corporations.
- Providing advice on formulating legislation or regulations, monitoring corporate activities, evaluating investment contracts, and negotiating with corporations on specific projects.

The NPC does not believe that a need for this last type of activity on the part of the UN has been demonstrated. Competent and experienced private consultants and information sources in all of these areas of expertise are readily available.

Bilateral Assistance Programs

A number of industrialized countries with petroleum-oriented goods and technological services to export have sponsored programs—often under the auspices of their state-owned companies—to assist OI DCs in developing indigenous petroleum resources. France, for example, supports a significant bilateral effort, much of which is aimed at African countries where there was formerly a French presence. The French Petroleum Institute works with the French national oil companies in providing engineering advice on oil exploration and development programs. In

turn, the French national oil companies implement French government policies as part of their official development assistance programs. Because of this close relationship with the government and their subsidized financing, the French national oil companies often have what is perceived to be an advantage over private counterparts. Italy has a similar bilateral program.

In 1981, Petro-Canada, the Canadian national oil company, created Petro-Canada International to assist developing countries. It acts as a direct delivery mechanism for Canadian energy-related development assistance and as an executing agency for other development assistance institutions, both national and international.

The Japan National Oil Company is also engaged in petroleum activities in developing countries, but its thrust is in the direction of enhancing Japan's oil supply security. It provides equity investment guarantees and technical assistance, and also acquires exploration rights at the government-to-government level. Most of the agreements link the amount of financing to production with the loans being repaid in kind, or provide for a Japanese party to lift a portion of production.

The NPC firmly believes that the most effective route to OI DC oil and gas development lies in drawing upon the proven record of competitive, private petroleum companies that can make the most efficient use of all available resources and technology. While bilateral programs can be of assistance to OI DCs in certain instances, equivalent services have long been available from private sources, including petroleum service companies, consultants, and contractors. In some instances, the focus of these national oil companies on efficient development of OI DC resources may be tied to bilateral arrangements, under which the host OI DC is not permitted to bring in outside, private suppliers of competitive technology and services unless specifically approved by the sponsoring agency.

U.S. Government Programs

Apart from normal commercial representation via its embassies and consulates, the U.S. government assists in the economic development of OI DCs through programs of bilateral development aid, export promotion and financing, and private investment insurance.

The U.S. Agency for International Development (AID) supports improvements in infrastructure in developing countries and provides training and institutional assistance. In the energy sector, U.S. assistance through AID has generally been in the area of new and renewable

sources of energy and not in the area of oil and gas exploration.

The U.S. Export-Import Bank (Eximbank) and the Private Export Funding Corporation (PEFCO) are related organizations designed to facilitate U.S. exports and foreign investment. Eximbank is an independent and self-sustaining organization wholly owned by the U.S. government that administers the official export credit and insurance programs of the United States.

The basic programs available through Eximbank include long-term, fixed-rate financing and financial guarantees of commercial bank and PEFCO loans; medium-term discount loans for fixed-rate U.S. commercial bank export loan notes; and medium-term credit guarantees or insurance policies to banks and exporters for commercial and political risks.

Eximbank abides by the Organization for Economic Cooperation and Development international export credit consensus, which sets interest rates based on the GNP per capita of the borrowing country and on the term of the loan. Eximbank has stated that its policy for the 1980s does not include artificial stimulation of exports through subsidized export credit.¹¹

The U.S. Department of Commerce does not directly finance, insure, or guarantee receivables from foreign sales or investments, but it does offer a wide range of services to provide contacts and information for exporters.

Political risk insurance for petroleum investments has become available to U.S. investors from the Overseas Private Investment Corporation (OPIC) during the last five years. This represents a significant departure from OPIC's previous refusal to insure any exploration or production investments. However, the total amount of potential coverage remains limited by policy and budgetary constraints. Also the coverage is restricted to net book value of the tangible equipment lost.

The NPC believes that investment risk insurance available via OPIC should be expanded to include a share of intangible investments as well as coverage of tangible assets on a fair market value rather than a book value basis.

Also, the NPC believes the U.S. government should expand its efforts to promote U.S. petroleum company involvement in OI DCs by providing for increased commercial representation in its OI DC embassies and consulates.

¹¹ Export-Import Bank, *Eximbank Report*, Washington, D.C., November 9, 1981.

Capital Scarcity Considerations

Under the current worldwide environment of high interest rates and softened oil prices, private petroleum companies will have difficulty in supplying the capital needed for petroleum development in some OIDCs. In rare instances, the solution to this capital constraint may lie in public sector financing of petroleum ventures, either via international lending agencies or via bilateral government-to-government loans or grants. However, governments cannot create credit without some impact on private sector credit availability.

Governments can supply credit only by preempting private borrowing in the world capi-

tal markets, raising taxes on private sector incomes, or inflating the money supply, thereby imposing a non-legislated tax increase on private incomes and wealth. Capital is always a scarce and costly resource, and while governments can temporarily alter the pattern of relative scarcity by subsidizing certain borrowers at the expense of others, they cannot increase their share of the total capital market without making capital more costly to private borrowers. As a consequence, the NPC believes that public sector funding of petroleum development in OIDCs may only be warranted in such special circumstances as are outlined in this chapter.

Appendices



THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

March 10, 1982

Mr. John F. Bookout
Chairman
National Petroleum Council
1625 K Street, N.W.
Washington, D.C. 20006


Dear Mr. Bookout:

The United States is moving rapidly toward its goal of energy security. We are reducing our energy consumption while, at the same time, we are accelerating the exploration and development of all domestic energy resources. Our success in this area is providing a strong example which many oil importing, developing nations may wish to follow. To the extent possible, the United States should encourage and help these nations in their efforts to develop their indigenous energy resources.

Accordingly, I request the National Petroleum Council to undertake a study to identify the potential and prospects for important new oil and gas development in nontraditional petroleum provinces throughout the world. Your study should attempt to identify those measures that could facilitate the development of these resources. Additionally, you should examine actions which the Federal Government can take to encourage United States companies to pursue oil and gas development in Third World countries.

For purposes of this study, I will designate Henry E. Thomas, Assistant Secretary for International Affairs, to represent me and to provide the necessary coordination between the Department of Energy and the National Petroleum Council. He will also provide coordination with the Department of State, other Federal agencies, and international organizations as required.

Sincerely,


James B. Edwards

Background Information on the National Petroleum Council

In May 1946, the President stated in a letter to the Secretary of the Interior that he had been impressed by the contribution made through government/industry cooperation to the success of the World War II petroleum program. He felt that it would be beneficial if this close relationship were to be continued and suggested that the Secretary of the Interior establish an industry organization to advise the Secretary on oil and natural gas matters.

Pursuant to this request, Interior Secretary J. A. Krug established the National Petroleum Council on June 18, 1946. In October 1977, the Department of Energy was established and the Council's functions were transferred to the new department.

The purpose of the NPC is solely to advise, inform, and make recommendations to the Secretary of Energy on any matter, requested by him, relating to petroleum or the petroleum industry. The Council is subject to the provisions of the Federal Advisory Committee Act of 1972.

Matters which the Secretary of Energy would like to have considered by the Council are submitted as a request in the form of a letter outlining the nature and scope of the study. The request is then referred to the NPC Agenda Committee which makes a recommendation to the Council. The Council reserves the right to decide whether or not it will consider any matter referred to it.

Examples of recent major studies undertaken by the NPC at the request of the Department of the Interior and the Department of Energy include:

- *U.S. Energy Outlook* (1971, 1972)
- *Potential for Energy Conservation in the United States: 1974-1978* (1974)
Potential for Energy Conservation in the United States: 1979-1985 (1975)
- *Ocean Petroleum Resources* (1975)
- *Petroleum Storage for National Security* (1975)
- *Enhanced Oil Recovery* (1976)
- *Materials and Manpower Requirements* (1974, 1979)
- *Petroleum Storage & Transportation Capacities* (1974, 1979)
- *Refinery Flexibility* (1979, 1980)
- *Unconventional Gas Sources* (1980)
- *Emergency Preparedness for Interruption of Petroleum Imports into the United States* (1981)
- *U.S. Arctic Oil & Gas* (1981)
- *Environmental Conservation—The Oil and Gas Industries* (1982)
- *Third World Petroleum Development: A Statement of Principles* (1982).

The NPC does not concern itself with trade practices, nor does it engage in any of the usual trade association activities.

Members of the National Petroleum Council are appointed by the Secretary of Energy and represent all segments of petroleum interests. The NPC is headed by a Chairman and a Vice Chairman who are elected by the Council. The Council is supported entirely by voluntary contributions from its members.

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The National Petroleum Council appreciates comments on sections of the report received from: Richard S. Davis, Vice President and Trade Finance Banker, The First National Bank of Chicago; Dr. Charles Ebinger, Energy and National Security Issues, Center for Strategic and International Studies; Timothy S. Greening, Staff Officer, The First National Bank of Chicago; Monroe Leigh, Esquire, Steptoe & Johnson; Charles P. McPherson, Energy Economist, The World Bank; and Stanley J. Marcuss, Esquire, Milbank, Tweed, Hadley & McCloy.

OIL-IMPORTING DEVELOPING COUNTRIES, 1980

APPENDIX C

Afghanistan	Haiti	Reunion
Antigua and Barbuda	Honduras	Rwanda
	Hong Kong	
Bahamas, The		St. Christopher-Nevis
Bangladesh	India	St. Lucia
Barbados	Ivory Coast	St. Vincent and the Grenadines
Belize		Sao Tome and Principe
Benin		Senegal
Bermuda	Jamaica	Seychelles
Bhutan	Jordan	Sierra Leone
Botswana		Singapore
Brazil		Solomon Islands
Burundi	Kampuchea	Somalia
	Kenya	Sri Lanka
	Kiribati	Sudan
Cape Verde	Korea, South	Suriname
Central African Republic		Swaziland
Chad		
Chile	Laos	
Comoros	Lebanon	
Cook Islands	Lesotho	Taiwan
Costa Rica	Liberia	Tanzania
Cuba		Thailand
		Togo
Djibouti	Macau	Tonga
Dominica	Madagascar	Tuvalu
Dominican Republic	Malawi	
	Maldives	
	Mali	Uganda
	Martinique	Upper Volta
El Salvador	Mauritania	Uruguay
Equatorial Guinea	Mauritius	
Ethiopia	Morocco	
	Mozambique	Vanuatu
Falkland Islands (Malvinas)	Namibia (South-West Africa)	Wallis and Futuna
Fiji	Nauru	Western Sahara
French Guiana	Nepal	Western Samoa
French Polynesia	Netherlands Antilles	
	New Caledonia	
	Nicaragua	Yemen (Aden)
	Niger	Yemen (Sanaa)
Gambia, The		
Ghana		
Grenada		
Guadeloupe	Pakistan	Zambia
Guatemala	Panama	Zimbabwe
Guinea	Papua New Guinea	
Guinea-Bissau	Paraguay	
Guyana	Philippines	

NOTE: The designation "country" employed in this appendix does not imply the expression of any opinion whatsoever on the part of the NPC concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. Some of the countries and governments included in this appendix are not fully independent, and others are not officially recognized by the U.S. government.

The designation "developing" is intended for statistical convenience and does not necessarily express a judgment about the stage in the development process reached by a particular country or area.

The degree of oil self-sufficiency of a country is determined primarily on the basis of the 1980 *Yearbook of World Energy Statistics*, United Nations, New York, 1981.

EXPLORATION WELLS DRILLED IN THE FREE WORLD, 1966-1980*

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Total
UNITED STATES	10,313	8,878	8,879	9,701	7,693	6,922	7,539	7,466	8,619	9,214	9,234	9,961	10,677	10,484	11,916	137,496
CANADA	1,505	1,448	1,609	1,820	1,535	1,534	1,633	2,219	1,735	1,649	2,481	2,801	3,144	2,925	3,841	31,879
OTHER INDUSTRIALIZED COUNTRIES†																
U.S. Companies	80	80	68	102	89	84	90	99	121	129	99	107	109	71	105	1,433
Others	277	207	216	255	228	210	244	261	232	285	279	268	360	255	363	3,940
Total	357	287	284	357	317	294	334	360	353	414	378	375	469	326	468	5,373
OIDCs‡																
U.S. Companies	14	73	59	66	49	137	123	119	148	129	84	79	65	78	64	1,287
Others	100	150	164	148	184	82	69	34	76	118	157	154	153	161	210	1,960
Total	114	223	223	214	233	219	192	153	224	247	241	233	218	239	274	3,247
OTHER DEVELOPING COUNTRIES																
U.S. Companies	225	170	211	205	228	283	271	265	258	231	179	152	189	198	226	3,291
Others	461	397	424	411	430	476	463	442	446	373	425	477	505	516	599	6,845
Total	686	567	635	616	658	759	734	707	704	604	604	629	694	714	825	10,136
Total Free World	12,975	11,403	11,630	12,708	10,436	9,728	10,432	10,905	11,635	12,128	12,938	13,999	15,202	14,688	17,324	188,131

* Excludes the Union of Soviet Socialist Republics, Eastern Europe, People's Republic of China, North Korea, Mongolia, and Vietnam.

† Australia, Israel, Japan, New Zealand, South Africa, and Western Europe including Turkey and Yugoslavia.

‡ See Appendix C.

SOURCE: American Association of Petroleum Geologists, October Monthly Bulletins, 1967-1981; and information data base maintained by PETROCONSULTANTS, S.A., Geneva, Switzerland.

FREE WORLD CRUDE OIL PRODUCTION, 1918-1980
(Million Barrels per Day)

<u>Year</u>	<u>United States</u>	<u>Other Free World</u>	<u>Total Free World</u>	<u>Year</u>	<u>United States</u>	<u>Other Free World</u>	<u>Total Free World</u>
1918	1.0	.2	1.2				
1919	1.0	.4	1.4				
1920	1.2	.6	1.8				
1921	1.3	.7	2.0	1951	6.2	4.6	10.8
1922	1.5	.7	2.2	1952	6.3	5.0	11.3
1923	2.0	.6	2.6	1953	6.5	5.4	11.9
1924	2.0	.6	2.6	1954	6.3	6.0	12.3
1925	2.1	.6	2.7	1955	6.8	6.9	13.7
1926	2.1	.6	2.7	1956	7.2	7.6	14.8
1927	2.5	.7	3.2	1957	7.2	8.2	15.4
1928	2.5	.8	3.3	1958	6.7	8.9	15.6
1929	2.8	.9	3.7	1959	7.0	9.6	16.6
1930	2.5	.9	3.4	1960	7.0	10.7	17.7
1931	2.3	.9	3.2	1961	7.2	11.5	18.7
1932	2.1	.9	3.0	1962	7.3	12.9	20.2
1933	2.5	.9	3.4	1963	7.5	14.1	21.6
1934	2.5	1.0	3.5	1964	7.6	15.7	23.3
1935	2.7	1.1	3.8	1965	7.8	17.1	24.9
1936	3.0	1.2	4.2	1966	8.3	18.8	27.1
1937	3.5	1.4	4.9	1967	8.8	20.3	29.1
1938	3.3	1.4	4.7	1968	9.1	22.8	31.9
1939	3.5	1.5	5.0	1969	9.2	25.4	34.6
1940	3.7	1.4	5.1	1970	9.6	28.4	38.0
1941	3.8	1.5	5.3	1971	9.5	30.4	39.9
1942	3.8	1.2	5.0	1972	9.4	32.5	41.9
1943	4.1	1.4	5.5	1973	9.2	36.7	45.9
1944	4.6	1.6	6.2	1974	8.8	36.5	45.3
1945	4.7	1.9	6.6	1975	8.4	33.1	41.5
1946	4.8	2.2	7.0	1976	8.1	37.2	45.3
1947	5.1	2.5	7.6	1977	8.2	38.7	46.9
1948	5.5	3.2	8.7	1978	8.7	38.4	47.1
1949	5.0	3.5	8.5	1979	8.6	39.5	48.1
1950	5.4	4.2	9.6	1980	8.6	36.7	45.3

SOURCE: *Twentieth Century Petroleum Statistics, 1981*, DeGolyer and MacNaughton, Dallas, Texas.

OIL PRODUCTION AND CONSUMPTION* IN OIDCs, 1976 AND 1980
(Thousands of Barrels Per Day)

	Production		Consumption		Deficit	
	1976	1980	1976	1980	1976	1980
Bangladesh	0.1	0.1	21.2	29.1	21.1	29.0
Barbados	0.4	0.8	3.4	4.3	3.0	3.5
Brazil	166.1	180.9	832.4	935.8	666.3	754.9
Chile	28.1	38.6	87.5	98.3	59.4	59.7
Cuba	4.7	5.2	144.9	177.0	140.2	171.8
Ghana	—	8.0	14.1	15.8	14.1	7.8
Guatemala	0.3	1.6	19.0	26.1	18.7	24.5
Hong Kong	—	—	76.1	100.3	76.1	100.3
India	173.2	187.9	375.0	501.9	201.8	314.0
Ivory Coast	—	2.4	23.6	15.8	23.6	13.4
Jamaica	—	—	45.0	37.7	45.0	37.7
Jordan	—	—	17.2	27.7	17.2	27.7
Kenya	—	—	23.7	21.9	23.7	21.9
Korea, South	—	—	310.4	450.5	310.4	450.5
Lebanon	—	—	34.3	33.3	34.3	33.3
Morocco	0.2	0.4	52.6	81.1	52.4	80.7
Netherland Antilles	—	—	68.2	76.7	68.2	76.7
Pakistan	5.5	9.8	73.8	83.3	68.3	73.5
Philippines	—	10.7	176.6	201.8	176.6	191.1
Singapore	—	—	104.6	138.6	104.6	138.6
Sudan	—	—	22.4	22.0	22.4	22.0
Taiwan	5.8	5.9 [†]	247.1	276.0 [†]	241.3	270.1 [†]
Thailand	0.2	0.2	164.1	221.7	163.9	221.5
Uruguay	—	—	37.8	33.7	37.8	33.7
All Other	—	—	403.9	470.2	403.9	470.2
Total	384.6	452.5	3,378.9	4,080.6	2,994.3	3,628.1

*Consumption data represent inland consumption of energy petroleum products, namely motor and aviation gasoline, kerosine, jet fuel, gas-diesel oil, heating oils, residual fuel oil, and liquefied petroleum gas. The data do not include bunkers (amounting to 452 thousand barrels per day in 1980) and non-energy petroleum products, namely bitumen, lubricating oils, naphthas, white spirit, paraffin wax, and petroleum coke (estimated at approximately 350 thousand barrels per day in 1980). Actual deficits were correspondingly larger than the values shown in the table above.

[†]As 1980 data for Taiwan are not available, data shown are for 1979.

SOURCE: United Nations, *1980 Yearbook of World Energy Statistics*, New York, 1981, for all countries except Taiwan, for which the data are from Institute of Gas Technology, *Energy Statistics*, Vol. 5, No. 1, Chicago, Illinois, 1982.

**WORLD BANK PETROLEUM LENDING:
EXPLORATION PROMOTION PROJECTS**

	Project Size (\$ Million)	World Bank Funding	
		Amount (\$ Million)	Interest Rate (%/Year)
Approved			
Fiscal Year 1977-1982 (Inclusive)			
OIDCs			
Somalia	7.2	6.0	*
Yemen (Aden)	10.0	9.0	*
Honduras	3.6	3.0	8.25
Guinea Bissau	6.9	6.8	*
Liberia	6.0	5.0	9.25
Mali	4.0	3.7	*
Costa Rica	2.3	2.0	9.6
Panama	8.0	6.5	9.6
Kenya	4.5	4.0	11.6
Gambia, The	1.7	1.5	*
Mauritania	3.2	3.0	*
Yemen (Sanaa)	2.2	2.0	*
Guyana	2.2	2.0	*
Madagascar	14.6	12.5	*
Nepal	10.9	9.2	*
Zambia	8.0	6.6	11.6
Equatorial Guinea	NA	NA	*
Subtotal	95.3	82.8	
OTHER†			
Congo	5.6	5.0	*
Total	100.9	87.8	
Pending (as of July 1, 1982)			
OIDCs			
Somalia		5.0	*
Guinea		10.0	*
Philippines		37.5	Bank
Ethiopia		NA	*
Ghana		9.5	*
Zambia		2.0	Bank
Equatorial Guinea		2.4	*
Papua New Guinea		3.0	*
Dominican Republic		5.0	Bank
Senegal		12.5	*
Total		86.9	

* International Development Association loans (no interest charge).

† Not an OIDC in 1980, per Appendix C.

SOURCE: The World Bank.

**WORLD BANK PETROLEUM LENDING:
EXPLORATION SUPPORT PROJECTS**

		Project Size (\$ Million)	World Bank Funding	
			Amount (\$ Million)	Interest Rate (%/Year)
Area or Type				
Approved				
Fiscal Year 1977-1982 (Inclusive)				
OIDCs				
Tanzania	Songo Songo	33.0	30.0	*
Jamaica	Pedro Bank, Sole Risk	8.4	7.5	9.6
Tanzania	Songo Songo	50.0	20.0	*
Morocco	Onarep Exploration	90.0	50.0	8.25
Subtotal		181.4	107.5	
OTHERS†				
Egypt	Western Desert	40.0	25.0	9.25
Portugal	Onshore Lusitanian Basin	26.0	20.0	9.6
Turkey	S.E. Turkey	45.0	25.0	9.25
Bolivia	Gas Appraisal Drilling	41.8	16.0	*
Argentina	NW Basin, Seismic	49.6	27.0	8.25
Subtotal		202.4	113.0	
Total		383.8	220.5	
Pending (as of July 1, 1982)				
OIDCs				
Madagascar	Tsmiroro Heavy Oil		9.0	*
Bangladesh	Western Areas		40.0	*
India	Krishna-Godavari		165.0	11.6
Total			214.0	

* International Development Association loans (no interest charge).

† Not OIDs in 1980, per Appendix C.

SOURCE: The World Bank.

**WORLD BANK PETROLEUM LENDING:
OIL DEVELOPMENT PROJECTS**

		Project Size (\$ Million)	World Bank Funding	
			Amount (\$ Million)	Interest Rate (%/Year)
Area or Type				
Approved				
Fiscal Year 1977-1982 (Inclusive)				
OIDCs				
india	Bombay High	571.0	150.0	8.2
Pakistan	Toot Field	73.0	30.0	*
India	Bombay High	823.0	400.0	9.25
Benin	Technical Consultation	NA	8.0	9.9
Ivory Coast	Exploration Joint Venture with Private Company	1,230.0	101.5	11.6+
Subtotal		2,697.0	689.5	
OTHERS†				
Turkey	Bati Raman	3.0	2.5	7.35
Peru	Field Rehabilitation	50.7	32.5	8.25
Turkey	Bati Raman	102.0	62.0	9.25
Argentina	Regional Development Bank	500.0	100.0	9.6
Romania	Enhanced Recovery	454.0	101.5	11.6
Subtotal		1,109.7	298.5	
Total		3,806.7	988.0	
Pending (as of July 1, 1982)				
OIDCs				
Sudan	Pipeline and Distribution		50.0	*
Pakistan	Dhodak		40.0	Bank
Thailand	Development and Refining		140.0	Bank
Subtotal			230.0	
OTHERS†				
China	Daqing		160.0	Bank
China	Dongpu		NA	Bank
Argentina	Oil and Gas		160.0	Bank
Colombia	Secondary Recovery		150.0	Bank
Ecuador	Secondary Recovery		70.0	Bank
Peru	Petroperu		81.2	Bank
Subtotal			621.2	
Total			851.2	

* International Development Association loans (no interest charge).

† Not OIDs in 1980, per Appendix C.

SOURCE: The World Bank.

**WORLD BANK PETROLEUM LENDING:
GAS DEVELOPMENT PROJECTS**

		World Bank Funding		
	Area or Type	Project Size (\$ Million)	Amount (\$ Million)	Interest Rate (%/Year)
Approved				
Fiscal Year 1977-1982 (Inclusive)				
OIDCs				
	Thailand	Engineering	5.7	4.9
	Thailand	Pipeline	850.0	107.0
	Bangladesh	Bakrabad	164.0	85.0
	Thailand	Gas Plant	600.0	90.0
				11.6
	Subtotal	1,619.7	286.9	
OTHERS†				
	Egypt	Gulf of Suez	167.0	75.0
	Egypt	Cairo Distribution	155.0	50.0
	Tunisia	Pipeline	88.0	37.0
	Egypt	Abu Qir	189.0	90.0
				11.6
	Subtotal	599.0	252.0	
	Total	2,218.7	538.9	
Pending (as of July 1, 1982)				
OIDCs				
	India	South Bassein		
	Pakistan	Sui	150.0	Bank
			50.0	Bank
	Subtotal		200.0	
OTHERS†				
	Tunisia	Development		
	Bolivia	Gas Recycling	NA	Bank
			60.0	Bank
	Subtotal		60.0	
	Total		260.0	

* International Development Association loans (no interest charge).

† Not OIDs in 1980, per Appendix C.

SOURCE: The World Bank.